

NOVITATES ANTILLANAE. IX

Alain H. Liogier  
Botanic Garden, University of Puerto Rico  
Río Piedras, Puerto Rico

Continuing studies in the Floras both of Hispaniola and of Puerto Rico have yielded some new records, some new combinations and some species new to science. The following notes bring up to date the known flora of both islands, so far. Both field work and herbarium studies bring to our attention some observations on the plants under study. The projected publication first of a Check-list of the Flora of Puerto Rico and adjacent islands, and later of a modern Flora of Puerto Rico, altogether with the preparation of the Flora of Hispaniola, having already published the first volume last January, will put together all the information on the Floras of these two islands.

POLYPODIACEAE

Pteris cretica L.

PUERTO RICO: Cultivated and escaped: Río Grande, A. & P. Liogier 32043, 32066. Tropics and subtropics. New to Puerto Rico.

LORANTHACEAE

Phoradendron mucronatum (DC.) Krug & Urban

PUERTO RICO: In thickets on hill, Guánica, A. H. Liogier 27924 (UPR). Lesser Antilles, Yucatan, Venezuela, Brazil. New to Puerto Rico.

AMARANTHACEAE

Alternanthera dentata (Moench) Stuehlich

PUERTO RICO: Cultivated and escaped, common on the island. Typical collections: On roadside, Paraiso, Fajardo, A. & P. Liogier, L. Martorell 30387 (UPR); on roadside, Aibonito, A. & P. Liogier, L. Martorell 31228 (UPR). West Indies, South America. The form most cultivated and escaped, both in Puerto Rico and in Hispaniola is cv 'Rubiginosa', with reddish to purple leaves, as stated in Hortus III (1976: 63).

Alternanthera ramosissima (Mart.) Chodat

The plant cited by Britton & Wilson (1924: 281) as Achyranthes ramosissima (Mart.) Standley, seems to be Gomphrena decumbens Jacq. (G. dispersa Standl.). I have no evidence of A. ramosissima growing in our area. I have seen a specimen from San Juan (J.A. Stevenson 2391), identified at the New York Botanical Garden; this plant is G. decumbens Jacq.; it was misidentified.

In a recent paper, Mears (1977) gives a key to some of the widespread species of Alternanthera; neither A. dentata nor A. ramosissima are mentioned; I have observed no equivalent of A. brasiliana in the Flora of Puerto Rico.

LAURACEAE

After studying the family, both for the Flora of Hispaniola and the Flora of Puerto Rico, in the preparation of its publication, and in view of recent papers, mainly the one by R. A. Howard (1981), I shall propose the following new combinations:

Cinnamomum Schaeffer has been considered by Kostermans (1961) as the generic name including Phoebe Nees. After considering the characteristics of these two genera, it is obvious that the thin differences are inconsistent and do not justify keeping the two genera separate. The following combination is made necessary:

Cinnamomum alainii (C.K. Allen) Alain, comb. nov.

Phoebe alainii C. K. Allen, Mem. N. Y. Bot. Gard. 21 (2): 109. 1971.

This species is endemic to the mountains of the Dominican Republic, in the Jarabacoa-Constanza area, and grows in the cloud forest at altitudes 1000-1500 m.

Ocotea Aublet

The merging of Nectandra and Ocotea greatly simplifies the nomenclature, although some species are readily recognized in the field as belonging either to Nectandra or to Ocotea, and an empirical classification is sometimes possible; nevertheless, the only consistent differential characteristic cited in the literature seems to be the position of the anther sacs, and this is not always reliable. In view of this, and following R. Howard's position, it is better to consider a single genus, though the writing of the analytic keys is somewhat complicated by the number of species involved. The following new combinations are proposed:

Ocotea caudato-acuminata (O. C. Schmidt) Alain, comb. nov.

Nectandra caudato-acuminata O. C. Schm., Repert. Spec. Nov. 27: 162. 1919.

Collected at Les Roseaux, Haiti (Type: Ekman 10148), known only from the type specimen. Characterized by its long-acuminate leaves and by its relatively large flowers. The fruit is still unknown.

Ocotea oligoneura (Urban) Alain, comb. nov.

Nectandra oligoneura Urban, Repert. Spec. Nov. 15: 170. 1918.

The type specimen is Taylor 190, from Consuelo, San Pedro de Macoris, Dominican Republic; it has been collected both in the mountains (Constanza, Pico Diego de Ocampo), and at lower elevations in the Dominican Republic, and only once in Haiti, near Anse à Pitre in the southern region, near the border with the Dominican Republic. Endemic to Hispaniola.

Ocotea patens (Sw.) Alain, comb. nov.

Laurus patens Sw., Prodr. 65. 1788.

Nectandra patens (Sw.) Griseb., Fl. Br. W. I. 280. 1860.

In his treatment of this species for Jamaica, Adams (1972:284) has a discussion showing some uncertainty as to the application of this binomial. The material from Puerto Rico and from Hispaniola is quite different from O. coriacea (Sw.) Britton. Although this species has

been cited from Martinique by Stehlé and Quentin (1949: 118) and by Schmidt (1929: 160), Howard does not mention it in his paper (1981). The type specimen is from Jamaica.

Ocotea pulchra (Ekman & Schmidt) Alain, comb. nov.

Nectandra pulchra Ekman & Schmidt, Repert. Spec. Nov. 27: 162.

Collected at Morne Rochelois, Miragoane, Haiti (Type: Ekman 8614), known from the type specimen only. This is characterized by its obovate to orbicular, subacuminate, bullate leaves and elliptic fruit, 2 cm long, 1 cm broad; it is considered by C. K. Allen as belonging to the same group as O. caudato-acuminata (O. C. Schm.) Alain.

Ocotea reticularis (Britton & Wilson) Alain, comb. nov.

Nectandra reticularis Britt. & Wils., Bull. Torrey Bot. Club 50: 38. 1923.

This species is endemic to Cuba; the original description was completed by Schmidt (Repert. Spec. Nov. 27: 101. 1929); it has been collected in Sierra Maestra and Sierra de Nipe, though Roig and Acuña (1951) do not consider the Sierra de Nipe locality in their treatment of the family in Leon & Alain's Flora de Cuba, Vol. 2.

Ocotea sintenisii (Mez) Alain, comb. nov.

Nectandra sintenisii Mez, Jahrb. Bot. Gart. Berlin 5: 419. 1889.

Collected in Puerto Rico, rare in forests; cited by Schmidt (1929: 159; 1931: 13) from Anse à Pitre, Haiti (Ekman 6919) and from Constanza (Ekman 13945); I have collected this plant in the Dominican Republic at Diego de Ocampo, Santiago, 1000 m alt. (A. Liogier 12687), at Isabel de Torres, Puerto Plata, 750 m alt. (A. Liogier 23668) and at Maimón, alt. 250 m (A. Liogier 26683). This species is distinguished from O. membranacea (Sw.) Howard by its larger flowers, its fruits ellipsoid, not globose. It grows in wet forest, at lower to middle elevations.

The problem of the identity of Nectandra earlei Britton ex Roig & Acuña from Cuba, remains to be solved, as stated by Howard (1981: 54). Without access to the field or to the Herbaria in Cuba, it would be difficult to decide on the right name for this plant.

#### LEGUMINOSAE-MIMOSOIDEAE

Mimosa invisá Mart.

PUERTO RICO: Eastern slopes, Sierra de Cayey, A. & P. Liogier, L. Martorell 29861 (UPR); in wet place, Humacao, A. & P. Liogier 31743 (UPR); native of tropical America, now widespread. New to Puerto Rico.

Schrankia leptocarpa DC., Prodr. 2: 443. 1825.

Schrankia portoricensis Urban, Symb. Ant. 2: 267. 1900.

Morongia portoricensis (Urban) Britton, Sci. Surv. P. R. & Virg. Isl. 5: 357. 1924.

Leptoglottis portoricensis (Urban) Britton & Rose, N. Am. Fl. 23: 140. 1928.

The differences cited by Urban between S. portoricensis and S. leptocarpa do not justify the maintenance of two different taxa; all recent authors have cited S. leptocarpa from the West Indies. Adams

(1972: 340) includes this species in the Flowering Plants of Jamaica, stating that it is widespread in the West Indies. Nevertheless, it is quite rare in Puerto Rico and does not occur in Hispaniola.

#### LEGUMINOSAE-PAPILIONOIDEAE

##### Arachis prostrata Bentham

PUERTO RICO: Introduced and escaped in Mayagüez, A. & P. Liogier 31996 (UPR). Native of Brazil, planted as forage plant. New to Puerto Rico.

##### Indigofera hirsuta L.

PUERTO RICO: Introduced and escaped, Mayagüez, A. & P. Liogier 31995 (UPR). Native of Australia, cultivated as forage. New to Puerto Rico.

##### Stylosanthes guyanensis (Aubl.) Sw.

PUERTO RICO: In Experimental Station, Corozal, planted and escaped, becoming a weed, A. & P. Liogier 31792 (UPR). Native of Central and South America. New to Puerto Rico.

#### EUPHORBIACEAE

##### Alchorneopsis floribunda (Bentham) Muell. Arg. in *Linnaea* 34: 156. 1865.

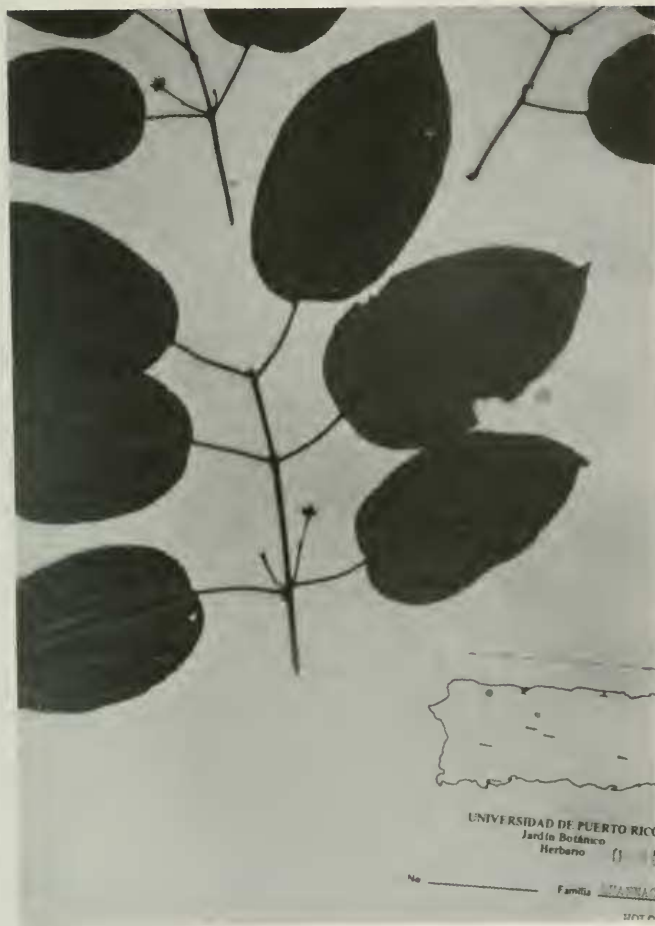
Alchorneopsis portoricensis Urban, *Symb. Ant.* 1: 337. 1899.

As stated by Urban, the differences between these two species are so tenuous, that it is better to consider a single taxon. In the West Indies, it is found both in Hispaniola and in Puerto Rico, and in northern South America.

#### RHAMNACEAE

##### Auerodendron pauciflorum Alain, sp. nov.

Frutex or arbor parva; rami hornotini glabri in sicco striati nigro-punctati, supra petiolorum insertionem brevissime pilosuli; stipulae ad petioli basim binae, late ovato-triangulares, 1.5 mm longae, 1 mm latae margine ciliatae; folia opposita vel subopposita, petiolis ad basim articulatis 2-2.5 cm longis, lamina ovata vel ovato-elliptica basi rotundata vel truncata, saepe inaequilatera, apice rotundata, acuta vel breviter acuminata, mucronata, 6-15 cm longa, 3.5-6 cm lata, nervo medio supra impresso, subtus prominente, nervis lateralibus utroque latere 6-8, utrinque prominulis, ad marginem curvatis, non anastomosantibus, chartacea, glabra, supra obscure viridia, pellucido-glandulosa et glandulis nigris sparse obsita, reticulato-venosa, subtus pallidiora; flores in axillis 2-3, pedunculo 5-7 mm longo, pedicelli 6-7 mm longi, bracteolae ad pedicellorum basim, ovatae 0.5 mm longae, valde ciliatae; alabastra ovoidea, 2.5 mm longa, apiculata; calycis tubus late campanulatus 2 mm longus 3 mm latus, lobi triangulari-lanceolati, ad apicem incrassati intus carinati, carina in tertio inferiori interrupta, 2.5 mm longi, 1.4 mm lati; petala sub sinibus sepalorum inserta, obovata, in sicco conduplicata, apice truncata emarginata, basi in unguem contracta 2 mm longae; antherae ovatae 0.75 mm longae, longitrorsum dehiscentes in 1/3 altitudinis affixae; discus calyci adnatus; stylus 1.5 mm longus, stigma capitato integro; fructus ignotus.



*Auerodendron pauciflorum* Alain

PUERTO RICO: Guajataca tunnel, intersection of Road 2 and Road 113, Nov. 15, 1976, R. O. Woodbury s.n. (Typus: UPR 9006; Isotypi: NY, US); id., May 9, 1959, R. O. Woodbury 3651 (UPR); id., April 1964 R. O. Woodbury s.n. (UPR 1893).

This is the first record of this Antillean genus in Puerto Rico; oddly enough, no species has yet been collected in Hispaniola, only one in Jamaica and seven in Cuba, one of them, A. northropianum (Urb.) Urb. is also found in the Bahamas Islands.

The affinities of this species are with A. jamaicense (Urb.) Urb. and with A. acuminatum (Griseb.) Urb. The former has glabrous and longer (3-3.5 mm long) stipules, the primary nerves in the leaf blades are anastomosed at the margin, the inflorescence is pilose, 3-7-flowered. The latter has setaceous-acuminate stipules, the leaves acuminate without pellucid glands, the calyx puberulent.

#### SAPINDACEAE

About ten years ago, Frank Votava, working on his Doctorate dissertation at the New York Botanical Garden, studied the genus Thouinia Poiteau; in view of the time elapsed, and since his dissertation has not been published, I need to establish the following new combinations as a result of his studies. I agree fully with his conclusions and give him full credit for them.

Thouinia domingensis var. deflexa (Radlk.) Votava & Alain, comb. nov.

Thouinia deflexa Radlk., Ark. Bot. 21 (5): 11. 1927.

Thouinia revoluta Radlk., Ark. Bot. 21 (5): 12. 1927.

Thouinia tomentosa var. rigidissima (Radlk. & Ekman) Votava & Alain, comb. nov.

Thouinia rigidissima Radlk. & Ekman, Ark. Bot. 21 (5): 10. 1927.

Thouinia striata var. portoricensis (Radlk.) Votava & Alain, comb. nov.

Thouinia portoricensis Radlk. in E. & Pl., Nat. Pfl. Fam. 3 (5): 311. 1895.

Thyana portoricensis (Radlk.) Britton, Sci. Surv. P. R. & Virg. Isl. 5: 526. 1924.

#### LYTHRACEAE

Cuphea hyssopifolia HBK.

PUERTO RICO: On roadside, Aibonito, A. & P. Liogier 31938 (UPR). A cultivated species, escaped and now part of our Flora; native of Mexico and Central America, New to Puerto Rico.

#### MYRTACEAE

Eugenia bahoruca Alain, sp. nov.

Frutex, 75 cm altus; rami hornotini brevissime pilosi, vetustiores cortice griseo irregulariter fissis, glandulosi; folia 1 mm longe petiolata, petiolo supra canaliculato glabro; lamina elliptica vel ovato-elliptica, 5-12 mm longa, 4-8 mm lata, basi rotundata vel obtusa, nervo medio surra leviter impresso, subtus prominulo, lateraliibus nullis vel in folia vetustiora supra vix obvisis, glandulis pellucidis obvisis, subtus nigrescentibus non prominulis, in folia vetustiora glandulis non pellucidis subtus nigris, in sicco supra grisea



*Eugenia bahoruca* Alain

subtus pallidiora, coriacea utrinque nitida glabra, margine incrassata; flores ad foliorum axillis solitarii, alba; pedicelli filiformes 3-6 mm longi, bracteae anguste ovatae, 0.6 mm longae ciliolatae; alabastra globosa glabra, ob sepalorum forma ut videtur 4-lobata 1 mm diametro; sepala 4 orbicularia glandulosa, inaequimagna; petala non plane visa; fructus (juvenili?) anguste ellipsoideus 5 mm longus 3 mm latus basi longe angustatus, apice calycis lobis coronatus, lobi oblongi, apice rotundati, ciliati, 2 mm longi, 1 mm lati.

HISPANIOLA, DOMINICAN REPUBLIC: On limestone rocks, between Milo and Isla, Aceitillar, Pedernales, Bahoruco Mountains, 1000 m alt., 22 jun 1977, Alain & Perfa Liogier 26856 (Holotypus: UPR; Isotypus: NY).

A small-leaved species in the vicinity of E. nannophylla Urban; this last species has glabrous twigs, the leaves are oval to elliptic, rounded at both ends, up to 5 mm long; the flowers with pedicels to 2 mm long, the calyx lobes 2 mm long; I cannot compare the fruits, unknown in E. nannophylla.

#### MELASTOMATACEAE

Clidemia portoricensis Alain, sp. nov.

Frutex 2 m altus; rami hornotini teretes, cum petioli setulis rectis vel curvatis usque 1 mm longis muniti, et trichomatis brevibus dense brunneo-furfuracei, vetustiores cortice delapso glabri, leviter striati vel laevi; folia petiolis 1-6 mm longis indumento ramorum, lamina elliptica vel anguste ovata, basi acuta vel obtusa, apice acuta vel breve acuminata, 1-1.3 cm longa, 4-13 mm lata, e basi 3-nervia, nervis binis exterioribus a margine 1-2 mm distantibus, ad apicem paullatim margini approximatis, utroque facie prominulis, nervis transversalibus utroque latere 6-8, supra prominulis, subtus vix prominulis, supra glabra subtus ad nervos setis plus minus curvatis sparse munita, chartacea, margine integra, sparse setosa, supra in sicco obscure brunnea, subtus pallidiora; flores 4-meri in foliorum axillis solitarii, pedicello usque 1 mm longo, furfuraceo; bracteae ad pedicelli basi binae ovatae 0.5 mm longae, furfuraceae, acutae; calycis tubus campanulato-turbinatus, setoso-hirsutus et furfuraceus, 1.2 mm longus, lobi late triangulati 0.5 mm longi acuti, apice breviter apiculati, extus dentati; petala roseo-alba oblonga, apice truncata vel rotundata, basi longe unguiculata, 1 mm longa glabra; staminorum filamenta applanata apice constricta, 1 mm longa, antherae falcato-curvatae, 1.2 mm longae, apice porosae, connectivo non appendiculato nec infra loculos producto; fructus in statu juvenili (?) tantum visum, globosus, 2 mm diametro, setosus, furfuraceus, tuberculatus.

PUERTO RICO: Río Abajo, Utuado, Jan 8, 1970, R. O. Woodbury s.n. (Holotypus: UPR 2517); id., Apr. 9, 1960, R. O. Woodbury 4110 (UPR).

A small-leaved species, in the vicinity of C. pusilliflora Cogn.; this past species has leaves oblong to ovate-oblong, rounded at the apex, 2-3.5 cm long, 8-17 mm broad; the calyx lobes are obtuse, the tube glandular-pilose.

#### LOGANIACEAE

Polypremum procumbens L.

PUERTO RICO: In siliceous sand, Tortuguero, Vega Baja, R. O. Woodbury s.n., June 1970 (UPR 2828); id., Sept. 1971 (UPR 2829); A. & P.





*Clidemia portoricensis* Alain

Liogier & al. 30646 (UPR); Cuba, southern United States, Bahamas, Jamaica, Mexico, Central America, South America, Hawaii.

#### CONVOLVULACEAE

Evolvulus alsinoides var. grisebachianus Meissn.

PUERTO RICO: On limestone rocks, Morrillos de Cabo Rojo, A. & P. Liogier, L. Martorell 31133 (UPR); Florida, Bahamas, West Indies, Central America, Guianas. New to Puerto Rico.

#### GRAMINEAE

Themeda arguens (L.) Hack.

PUERTO RICO: On roadside, near Aibonito, A. & P. Liogier, L. Martorell 31234 (UPR); native of Asia, introduced into the West Indies. New to Puerto Rico.

Urochloa mosambicensis (Hack.) Dandy

PUERTO RICO: Fortuna Experimental Station, planted and escaped, A. & P. Liogier, L. Martorell 29542 (UPR). Native of tropical Africa, a forage plant, escaping from cultivation. New record for Puerto Rico.

#### ORCHIDACEAE

Epidendrum ibaguense HBK. (E. radicans Pav. ex Lindl.).

PUERTO RICO: On roadside, El Verde, Luquillo Mountains, A. & P. Liogier 31892 (UPR). Native of Central and South America, planted in the tropics. New to Puerto Rico.

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